Modeling viral kinetics

$$\frac{dT}{dt} = -\beta VT - \Phi IT + \rho R$$

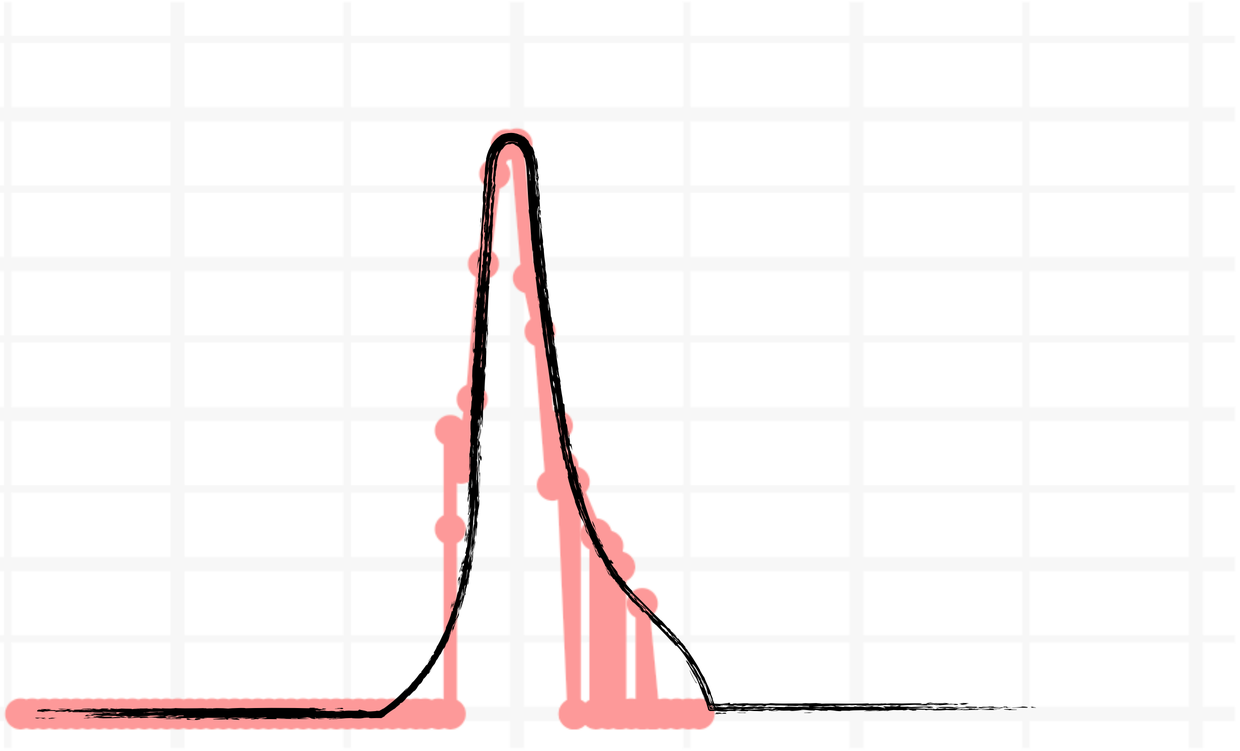
$$\frac{dR}{dt} = \Phi IT - \rho R$$

$$\frac{dE}{dt} = \beta VT - kE$$

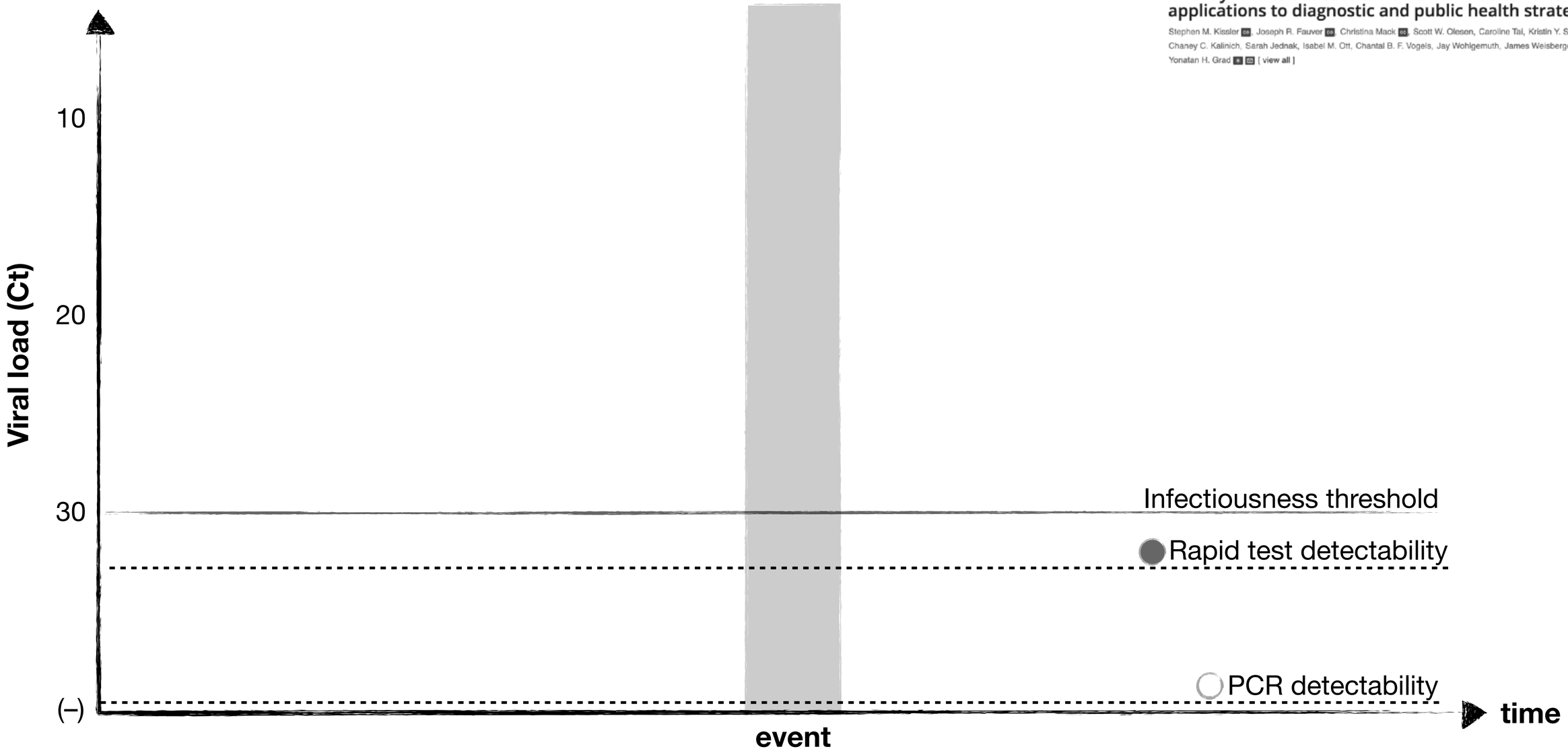
$$\frac{dI}{dt} = kE - \delta I$$

$$\frac{dV}{dt} = \pi I - cV,$$

Ke *et al.* (2021), PNAS



Using viral kinetics to set testing guidelines



PLOS BIOLOGY

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RESEARCH ARTICLE

Viral dynamics of acute SARS-CoV-2 infection and applications to diagnostic and public health strategies

Stephen M. Kissler, Joseph R. Fauver, Christina Mack, Scott W. Olesen, Caroline Tai, Kristin Y. Shiue, Chaney C. Kalinich, Sarah Jednak, Isabel M. Ott, Chantal B. F. Vogels, Jay Wohlgemuth, James Weisberger, John DiFiori, [...], Yonatan H. Grad [view all]